1   What is claimed is:

2

3   1.   A method for operating an electrical machine (1) for the output of electrical

4   power (12) comprising an excitation winding (2) and a stator winding (4), after

5   which a converter configuration (6) is located,

6   wherein, in the range of an idle speed of an internal combustion engine, the

7   output of electrical power (12) takes place along the torque line (29)

8   independently of the number of coils w_1, w_2 and, in the upper speed range on the

9   other side of the idle speed of an internal combustion engine, the output of

10   electrical power (12) takes place via an electrical machine (1) having a stator

11   winding (4) comprising a small number of coils w_2.

12

13   2.   The method according to Claim 1,

14   wherein the voltage difference between vehicle electrical system (10) of the

15   motor vehicle and the machine terminals (5) is compensated for by means of a

16   pulse-width modulation inverter (6).

17

18   3.   The method according to Claim 1,

19   wherein, in the idle speed range of an internal combustion engine, the power

20   output (12) of the electrical machine (1) takes place via the pulse-width

21   modulation inverter configuration (6).

22

23   4.   The method according to Claim 1,

24   wherein the pulse-width modulation inverter (6) processes a current that is

25   inversely proportional to the number of coils of the stator winding (4) of the

26   electrical machine (1).

27

28   5.   The method according to Claim 1,

29   wherein the output of electrical power (12) above the idle speed range takes

30   place according to the power curve (24) of an electrical machine (1) having a

31   small number of coils w_2.

6.   The method according to Claim 1,

wherein, by operating the electrical machine (1) using a pulse-width modulation

inverter (6), the number of stator windings can be selected independently of the

inception speed (25.1, 25.2).

7.   The method according to Claim 1,

wherein, in the lower speed range, the output of electrical power (12) takes place

almost up to its maximum value (27) according to the torque line (29) via the

pulse-width modulation inverter (6).

8.   The method according to Claim 1,

wherein the average efficiency of the electrical machine (1) is increased by

outfitting the electrical machine (1) with a smaller number of coils w_2.